

ART. X.—*Artificial Anus from Gunshot Wound, operated on by Free Abdominal Section.* By R. A. KINLOCH, M. D., late Surgeon of the Roper Hospital, Professor of Materia Medica and Therapeutics in the Medical College of the State of South Carolina.

LIEUTENANT T. G. B. was wounded in the abdomen on the 22d of October, 1862, at the battle of Bee's Creek. The ball entered below the right anterior-superior spinal process of the ilium, traversed the abdominal walls obliquely upwards from right to left, making its exit about three inches to the left of the median line, and below the umbilicus. The track of the wound, at its point of greatest depth, about two and a half inches to the right of the median line, implicated the peritoneum and the intestine.

Symptoms of shock were in due time followed by those of serious intestinal inflammation, with vomiting, constipation, excitement, tender abdomen, and disposition to collapse. On the eleventh day after the injury the more violent symptoms began to subside, with purulent and fecal discharges through the orifice of entrance. More than a month after the reception of the wound, a fecal operation per rectum was induced by an enema. This was the only one, and was believed to consist merely of the contents of the larger bowel that had cumulated previous to the injury.

Up to this time Lieut. B. had been under the care of my friend, Dr. Dupont, of Grahamville, S. C., to whose skill and devoted attention he was indebted for having thus far survived the severe injury. At the request of Dr. Dupont, I first saw him on the 13th of February, 1863. He was bedridden, feeble, and emaciated; there were several diffusive fecal abscesses discharging through fistulae, and connected with sinuses leading to the now fistulous orifices of entrance and exit of the projectile. As a palliative means of relief, several sinuses were laid open, the orifice of entrance enlarged, and a seton passed through the track of the wound to limit the diffusiveness of the abscesses and direct the discharges to one dependent opening. Lieut. B. remained under the care of Dr. Dupont, as he was seventy miles from Charleston, and I could only hope to see him occasionally when other duties called me to his neighbourhood.

I visited him again on the 20th of March. The superficial diseased condition had somewhat improved, but I found it necessary to open another sinus in order to ascertain more correctly the position of the intestinal lesion. The finger could be passed into the perforation, but the great depth of the wound prevented any accurate knowledge of the relation of parts. I now advised patient to remove to the city, where I could better give him my attention. Early in April he suffered from increased abdominal pain, with febrile excitement and subsequent jaundice. For this condition he was treated with mild mercurials and opiates, by my friend Dr. Wm. H. Anderson, in the absence of Dr. Dupont.

On the 11th of May patient was sufficiently relieved of the late attack to start for the city. He travelled with great difficulty by ambulance and railroad, being compelled to remain recumbent. Upon his arrival here, as an attack upon the city was threatened, his destination was changed to the Summerville Hospital, twenty-two miles distant. I visited him there on the 27th of May, and through the kind courtesy of my friend, Surgeon E. E. Jenkins, then in charge of the hospital, I was enabled to assume charge of any operative procedure to be instituted in the case.

A thorough dissection of the abdominal walls about the contour of the opening, alone enabled me to correctly appreciate the intestinal lesion. By exploration with the finger and with a bougie, I now ascertained that the *artificial anus* communicated only with the upper or proximate portion of the intestine, which passed backwards and to the left; the lower or distal portion could not be discovered. The discharge which now oozed from the opening was a thin brown liquid, containing whitish particles; it was evidently composed in part of chylous liquid.

I expressed the opinion that a prospect of escape from early death could only be offered by an operative procedure, which would have for its object the direct union of the divided intestine, and restoration of the continuity of the canal. The only feasible plan seemed to me to consist in the hazardous proceeding of *opening the peritoneal cavity as the essential and primary step*. Without such an effort to save, death was only a question of time, as emaciation and exhaustion were progressing surely. After a full understanding of the serious character of the operation, and the many chances against its success, Lieut. B. decided, with a manly heroism, to accept the little hope it offered.

On the 8th of June, having been previously notified by Surgeon Jenkins of the favourable condition of the patient since my explorative proceedings of the 27th of May, I visited the hospital, and the patient being under chloroform, practised the following operation :—

The peritoneal cavity was opened by an incision in the median line, starting from just below the umbilicus, and extending downwards for three and a half inches. The index finger was then passed into the cavity, and under the right lip of the wound towards the seat of the artificial anus; in its passage some adhesions of the intestines to the peritoneum were broken up. A second incision was now made through the thickness of the abdominal walls, beginning at the lower end of the perpendicular wound, and running transversely to the artificial anus, so as to raise a triangular flap. The cavity was thus thoroughly exposed; the mass of intestines protruded; and with care I soon traced up the portion of intestine which ended in the artificial opening. The intimate adhesions of the gut at this point were next broken up with my fingers, and by light touches of the knife. The barrel of intestine was found to be thoroughly divided, or so deeply notched as practically to amount to division; and while the upper end was fixed to the contour of the opening through the abdominal parietes, the lower was reflected towards the cavity, and thus was the continuity of the intestinal channel interrupted. The upper end was of normal, or rather increased calibre, while the lower end was contracted, and the coats much thickened. As the next step in the operation I excised about half an inch of the upper, and about two inches of the lower portion of the gut, so as to procure comparatively healthy surfaces for apposition. The mesenteric portion of the bowel was not divided. But one small vessel required a ligature. My desire was then to invert the lower extremity of the gut, and, by the suture of Jobert, drag the upper end into this lower canal, so as to secure full contact of the peritoneal surfaces of either portion. But the contracted condition of the lower orifice precluded this plan, and compelled me to resort to simple apposition of the ends. These ends I fixed carefully together by a number of points of interrupted silver wire suture, and then by three additional wires, passed after the method of M. Lembert, I managed to bring together some portion of the opposing serous surfaces. During the operation, assistants, with soft

sponges, carefully prevented blood from entering the deep portion of the cavity, and, by means of soft towels wrung out of tepid water, protected the mass of intestines from undue exposure. The abdominal wounds were finally closed by stout silk sutures passing through the entire thickness of the edges; the ligature attached to the artery was brought out at the lower extremity of the transverse wound, and thus served to retain the intestine at this point. A soft compress, and a broad bandage around the abdomen completed the dressing.

The operation had been necessarily protracted, and during the performance the patient was kept entirely insensible by chloroform. Upon its completion, symptoms of depression were urgent, and required the free use of morphia and brandy. In the course of an hour he rallied sufficiently to be safely removed to bed. I returned to the city, and left the patient in charge of Surgeon Jenkins. The after-treatment advised was that with opiates and light nourishing diet.

From Surgeon Jenkins I learned that the case progressed with entire satisfaction; reaction was but slight, and called for no special interference. Patient continued hopeful and cheerful. The abdominal wound united successfully. On the third day after the operation some of the intestinal sutures gave way or cut through, and a fecal discharge of the usual character took place through the lower angle of the abdominal wound. On the seventh day patient complained of some abdominal fulness; an enema was administered, and brought a good feculent stool, with relief of uneasiness. From this time the intestinal flow through the natural way became fully established, and the bowels responded naturally; the discharge by the fistula, however, continued. Patient improved daily in strength, and began to gain flesh. In three weeks from the date of operation he was enabled to sit up in a chair fixed upon rollers, and to propel himself about the hospital ward. On the 10th of July he felt well enough to leave the hospital and return home, a distance of eighty miles by railroad. I had previously advised against any farther interference for the present. A month after reaching home he was enabled to exercise on his feet with the aid of crutches, and his nutrition and strength improved daily.

My engagements prevented me from seeing Lieut. B. again until the 18th of January, 1864. I found him then greatly improved in appearance. He was still using his crutches, but rather from habit than necessity, and was disposed to lean forwards when walking, to relax the abdominal muscles. The fistula still discharged a thin brown matter, varying in quantity at different times. He had daily stools of a healthy character. A careful examination of the fistula disclosed a condition resembling the artificial anus consequent upon sloughing of the intestine after strangulated hernia. The gut presented an angle to the abdominal opening, and its channel was divided, in part, by a bridge or spur-like process, over which the liquid contents had to mount in passing on towards the rectum. This was evidently due to the projection of the mesenteric portion of the bowel between the lips of the intestinal wound where these were united to the abdominal wall. As the first step towards curing the fistula, I concluded that this bridge must be destroyed. To accomplish the object, I visited the patient on the 11th of March, and adjusted Dupuytren's *enterotome*, with directions for the blades to be very gradually approached from day to day until the intervening tissue was divided. Patient was left in charge of Dr. Anderson. Saw him, with Dr. A., on the 28th of March; learned that the *enterotome*, under the almost too diligent attention of

patient, had cut through on the fourth day, but without any unpleasant results. The discharge from the fistula had promptly lessened in quantity, and now was hardly more than a brown serous liquid; the opening was smaller, and the spur could not be detected. As the tissues about the fistula were of a cicatricial character, I concluded that the actual cautery would be better suited for closing the orifice than the use of pins, or any form of plastic operation. I consequently applied a small button-shaped cautery to the contour of the abdominal opening, protecting the intestine by a little wet lint, forced more deeply into the canal.

Circumstances have ever since prevented me from seeing Lieut. B. From Dr. Anderson and himself, however, I have gathered further particulars of his case.

The cautery was repeated by Dr. A. several times during the months of April, May, and June, and at first promised good results. Finally an effort was made by Dr. Anderson to close the opening by means of deep-curved steel pins. This resulted also in failure. After this, Lieut. B. was forced to leave his home and go into the interior of the State, where he received no further surgical treatment. Upon his return home, after the close of the war, I received, in a letter dated June 24th, 1866, the following additional information :—

"The wound is still open, and I can feel, with the end of my little finger, the same wall or impediment that you once cut away with the long-forceps. It is not, however, so much of an impediment but that I would risk having the wall of the abdomen closed above it. There is frequently something like a hernial protrusion at the wound, but the compress keeps this back. My evacuations by the natural channel are very regular. My general health is good. I weigh *over two hundred pounds*, being not quite as heavy as before I was wounded. I can ride half a day in a buggy without fatigue, and can often walk a mile without resting; but generally I suffer if long on my feet. * * * *

"The discharge from the wound varies constantly. Usually it is the colour and consistency of soft fecal matter, but at times I am troubled with a thin, slimy, serous flow, which escapes under the compress. I can commonly go from morning to night without washing, for the thick feces passes without escaping. A great deal depends on my diet; fresh meat always occasions a serous discharge, and most vegetables disagree. My diet is chiefly corn-bread and hominy, with salt ham and a great deal of milk. I think you could still do something more for me, and, had I the means, I would come to you without delay."

I concur in the expression of regret contained in the last sentence quoted, for I feel confident that surgery is capable of completing the cure in this interesting case. I have been induced to offer the notes for publication with no view of claiming the degree of success aimed at by the several operative procedures instituted, but because the history appeared to me to possess the following points of interest :—

1. It adds another instance of recovery after severe gunshot wound of the small intestine.

2. It is an argument against the almost universal practice of abandoning intestinal lesions to nature, rather than risk opening the peritoneal cavity.

3. It is a record of successful conversion of an *artificial anus*, with its attendant symptoms of failing nutrition, into a *fecal fistula*, compatible with good nutrition, and a high degree of health and activity.

4. It is illustrative of the readiness with which the function of a large extent of intestine can be resumed after a suspension of over *seven months*

(from October 22d, 1862—the day of the reception of the wound—to June 8th, 1863, the date of the operation for restoring the continuity of the intestine).

5. It must serve to encourage that hopefulness and boldness so essential to progressive surgery, and at all times preferable to despair.

ART. XI.—*Case of Elephantiasis Græcorum, treated by Ligature of the Common Carotid Artery on both sides.* By J. M. CARNOCHAN, M. D., Surgeon-in-Chief to the State Hospital, New York, formerly Professor of Clinical Surgery, &c. (With two plates.)

PATHOLOGICAL combinations exist, at times, in certain morbid growths, involving the cutaneous and immediate subcutaneous tissues, which render it somewhat difficult to give them a definite position according to conventional classification. Certain enlargements of the limbs, scrotum, labia majora, face, &c., usually accompanied by hypertrophy of the skin, distinct from phlegmon, from œdema, and from bloody tumours, have long been, and are still, described or designated under the name of elephantiasis arabica or arabum.

Patients affected, however, with elephantiasis græcorum, have sometimes presented not only œdema of the lower limbs, which is common, but the true hard and bulky enlargement of Arabian elephantiasis also.

The case described below, and carefully represented in the accompanying plates, was partially of this mixed character. The characteristic signs or manifestations, however, peculiar to elephantiasis græcorum, were, throughout its progress, so predominant that it can only be considered properly as a case of that disease.

We are informed by Pliny that the malady was indigenous to Egypt—“*Ægypte peculiare hoc malum*”—but we learn from other Latin and Greek authors, as well as from the writings of more recent observers—among whom may be mentioned Larrey, Heberden, Robinson, Adams, and Rayer—that the disease has been met with in most parts of the globe. It is undoubtedly very rare in the United States, where but few cases, as far as I am aware, have been seen.

CASE.—Mrs. Phebe B. was born in New Jersey, in the year 1814, of healthy parents, in good circumstances, who were also natives of the same State. Her father died of disease of the kidneys at the age of eighty, never having had any morbid growth; her mother also enjoyed good health until near the period of her death, which occurred at the age of eighty-five. She has three sisters and two brothers, who have been free from unusual disease, and are still living and healthy.

Until the age of twenty-eight, Mrs. B. had always been free from bad health, and, in fact, was supposed to have an excellent constitution. Her